

Speedway Decimal Field Trip

Decimal Place Value & Operations: Compare and order decimals to thousandths, explain place-value patterns when multiplying or dividing by powers of 10, and add, subtract, multiply, and divide decimals to hundredths to solve real-world problems, including money.

Learning target: I can compare and round decimals and add, subtract, multiply, and divide decimals using place value.

Success looks like: Students use the vocabulary correctly, complete the virtual field trip, and score 80% or higher on the evidence-based exit ticket.

Materials: Student devices, the printed lesson worksheet (one per student), projector for the mini-lesson presenter.

LESSON AT A GLANCE

60 minutes

Time	Part	Teacher does	Students do
0:00-0:08	Warm-up	Project the warm-up. Circulate, then call on 2-3 students. Save question 3 for the debrief.	Answer Part 2 of the lesson worksheet; share with a partner.
0:08-0:20	Mini-lesson	Teach with the 4-step presenter. Run each quick check with the whole class.	Complete worksheet Parts 4-11 as each slide appears; answer checks with fingers.
0:20-0:48	Virtual Field Trip	Launch Speedway Decimal Field Trip. Assign mission levels; circulate with the answer key.	Play solo or in pairs; record code pieces; complete any written evidence task.
0:48-0:52	Debrief	Ask 2 debrief questions and revisit warm-up question 3.	Finish worksheet Part 13 (prediction check + one thing learned).
0:52-1:00	Exit ticket	Hand out the exit ticket. Collect and sort with the mastery guide.	Answer with evidence independently.

Key vocabulary

Word	Student-friendly definition
Tenths / hundredths / thousandths	The first, second, and third places to the right of the decimal point.
Expanded form	A number written as a sum of each digit's value ($3.45 = 3 + 0.4 + 0.05$).
Round	Change a number to a nearby, simpler value.
Power of ten	10, 100, 1,000... Multiplying by 10 moves each digit one place left.

1. WARM-UP

0:00–0:08 · 8 min

Warm-up expectations (post these): Answer in Part 2 of the lesson worksheet (or on this sheet). Number each answer to match the question. Answer in complete sentences. For math, show your work. Work silently for 5 minutes, then share with a partner for 2 minutes. Be ready to share one answer with the class.

#	Question	Look for
1	Write 0.7 as a fraction and in words.	7/10, seven tenths.
2	Which is greater: 0.5 or 0.45? Explain.	0.5, because 0.50 has 50 hundredths and 0.45 has 45 hundredths.
3	You buy a snack for \$1.25 and pay with \$2.00. How much change?	\$0.75.

2. MINI-LESSON

0:08–0:20 · 12 min

Project the Lesson presenter from the room page. It runs the whole hour: target and agenda, warm-up with timer, hook vote, 4 teaching steps (key idea, interactive tool, turn and talk, check for understanding), I do / we do / you do, a work-time screen with a timer and expectations, debrief, and the exit ticket. Press N for teacher notes, T to pause the timer, and P to pick a student.

Hook (1 min): Which is bigger: 0.5 or 0.45? Class vote: 0.5 / 0.45 / They are equal

Step 1 (3 min): Place value

Teach	Each place is 10 times the place to its right. $0.4 = 4$ tenths = 40 hundredths.
Interactive tool	Visual: 1 flat = 1 whole, 1 rod = 1 tenth, 1 unit = 1 hundredth: 1.35
Students do	Write the value of each digit in 3.572.
Turn and talk	Why is 0.5 greater than 0.45 even though 45 is more than 5?
Worksheet Part 5A	Each place is 10 times the place to its right. $0.4 = 40$ hundredths.
Check for understanding	In 4.382, what is the value of the 8? Answer: (D) 8 hundredths

Step 2 (3 min): Compare decimals

Teach	Line up the decimal points and compare place by place from the left. Adding zeros can help: 0.50 vs. 0.45.
Interactive tool	Visual: A number line from 0 to 1 in tenths
Students do	Order 0.6, 0.06, 0.66 from least to greatest.
Turn and talk	What does each zero in 0.050 tell you?

Worksheet Part 6A	To compare decimals, line up the DECIMAL POINTS and compare from the LEFT.
Check for understanding	Which is greatest? Answer: (C) 0.7

Step 3 (3 min): Round

Teach	Look at the digit to the right of the place you are rounding to. 5 or more rounds up; 4 or less stays.
Interactive tool	Board and notes
Students do	Round 3.46 to the nearest tenth.
Turn and talk	Why do we look only at one digit to decide how to round?
Worksheet Part 7A	To round, look at the digit to the RIGHT. 5 or more rounds up.
Check for understanding	Round 7.863 to the nearest tenth. Answer: 7.9

Step 4 (3 min): Operations

Teach	Add and subtract by lining up decimal points. Multiply as whole numbers, then count decimal places. Divide by a whole number: the decimal point goes straight up.
Interactive tool	Board and notes
Students do	Solve $4.5 + 2.37$ and 1.2×3 .
Turn and talk	Why must decimal points be lined up to add but not to multiply?
Worksheet Part 8A	When adding decimals, line up the DECIMAL POINTS.
Check for understanding	$4.5 + 2.37 = ?$ Answer: 6.87

I do: worked example (shown one step at a time)

1. Problem: 3.6×0.4 .
2. Step 1: Multiply as whole numbers: $36 \times 4 = 144$.
3. Step 2: Count decimal places: one in 3.6, one in 0.4 -> two in all.
4. Step 3: 1.44.
5. Check with an estimate: about $4 \times 0.4 = 1.6$. 1.44 is close, so it makes sense.

What to say on every slide is in the presenter script PDF.

We do: guided practice

Solve: 3.6×0.4 .

1. Multiply as whole numbers: $36 \times 4 = 144$.
2. Count decimal places: 3.6 has 1, 0.4 has 1, total 2.
3. Place the point 2 places from the right: 1.44.
4. Estimate: about $4 \times 0.4 = 1.6$, so 1.44 makes sense.

Answer: 1.44

You do: independent check (2 min)

Solve: $12.5 - 4.75$

Answer: 7.75. Students who miss it: 3-minute reteach at the teacher table, then start the room at the Explorer level.

Misconception: "Longer decimals are bigger." 0.45 is less than 0.5.

Misconception: "Line up the digits on the right when adding." Line up the decimal points.

Misconception: "Multiplying always gives a bigger answer." Multiplying by a decimal less than 1 gives a smaller answer.

3. VIRTUAL FIELD TRIP: SPEEDWAY DECIMAL FIELD TRIP

0:20–0:48 · 28 min

Launch: project the start screen, read the story aloud, and assign mission levels (Explorer = extra support, Agent = on level, Legend = challenge). Students can open Supports any time for read-aloud, bigger text, a word bank, and a scratch pad.

- Frame it as a real trip: "Buses leave in 1 minute!" Project the start screen and read the story together.
- Stops go in order along the route. Remind students that each stop's info card is their "tour guide," so they should read it first.
- Ask early finishers to write a postcard (3 sentences) home describing the most interesting stop.

Students turn in: the completion code plus their copied "turn in your work" block (Canvas Text Entry).

4. DEBRIEF

0:48–0:52 · 4 min

1. Why do we line up decimal points to add and subtract?
2. How can estimating help you place the decimal point?
3. Where do you see decimals outside of school?

Close the loop: return to warm-up question 3. Answer: \$0.75.

5. EXIT TICKET

0:52–1:00 · 8 min

Print the exit ticket PDF (page 2 is the key and mastery guide). Every item requires evidence: Part A asks students to justify each choice, Part B asks for an explanation, and Part C applies the standard to a new situation using Solve-Show-Explain. Sort results into Mastered, Approaching, and Beginning to plan tomorrow's groups.

LESSON RESOURCES

Resource	How it fits the lesson
Warm-up worksheet (PDF)	Optional standalone warm-up (also Part 2 of the lesson worksheet), with a key.
Mini-lesson presenter	Projectable, step-by-step interactive lesson with tools and quick checks (room page).

Resource	How it fits the lesson
Lesson worksheet (PDF + key)	One printable packet students complete during the whole lesson: short fill-ins and quick checks in 13 small parts that match the presenter slides.
Speedway Decimal Field Trip (.html)	The virtual field trip for Canvas, with differentiated levels, supports, and a turn-in.
Exit ticket (PDF + key)	Evidence-based check with a rubric and a mastery sorting guide.
Illustrative Mathematics (extra)	Free Grade 5 units on decimal place value and operations. https://im.kendallhunt.com/
Khan Academy: 5th Grade Math (extra)	Decimal practice with instant feedback. https://www.khanacademy.org/math/cc-fifth-grade-math
Math Learning Center: Number Pieces (extra)	Virtual base-ten pieces for decimal models. https://www.mathlearningcenter.org/apps
Estimation 180 (extra)	Daily estimation challenges that build number sense. https://estimation180.com/

ANSWER KEY: SPEEDWAY DECIMAL FIELD TRIP

Stop 1: The Timing Tower (code piece: S)

1. What is the value of the 8 in 40.582? -> 8 hundredths (0.08)
2. Complete the expanded form: $40.582 = 40 + 0.5 + 0.08 + \underline{\hspace{1cm}}$ -> 0.002
3. How do you say 40.582 in words? -> Forty and five hundred eighty-two thousandths
4. The timing screen zooms in. Place 40.58 seconds on this number line. -> Point at 40.58

Stop 2: Qualifying Day (code piece: P)

1. Order the speeds from fastest to slowest. -> 232.97 (Car 27) -> 232.790 (Car 12) -> 232.709 (Car 5) -> 232.079 (Car 8)
2. Which symbol makes this true? $0.45 \underline{\hspace{1cm}} 0.5$ -> <
3. Prove it: place 0.45 on the number line. Is it left or right of 0.5? -> Point at 0.45

Stop 3: The Scoreboard (code piece: E)

1. Round 40.582 to the nearest hundredth. -> 40.58
2. Round 229.463 to the nearest whole number. -> 229
3. Round 38.951 to the nearest tenth. -> 39.0

Stop 4: Pit Road (code piece: E)

1. A car makes two pit stops: 8.75 seconds and 9.3 seconds. What is the total time? -> 18.05 seconds
2. Driver A's lap was 41.26 seconds. Driver B's was 39.8 seconds. How much faster was Driver B? -> 1.46 seconds
3. Which is the correct way to line up $12.5 + 3.47$? -> Line up the decimal points: $12.50 + 3.47$

Stop 5: The Garage (code piece: D)

1. A model race car uses 0.4 liters of fuel per lap. How much fuel for 6 laps? -> 2.4 liters
2. A 12.6-mile practice run is split into 3 equal parts. How long is each part? -> 4.2 miles
3. $0.36 \times 10 = ?$ -> 3.6
4. The garage fuel gauge is a 100-square grid. Shade 0.36 of the grid. -> Shade 0.36 of the 100-square grid

Final code: SPEED